Statewide Health Care Insurance Plan Task Force
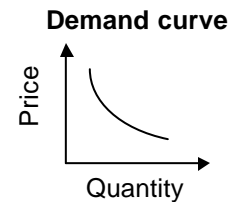
Elasticity of the Demand for Health Care Services

Arizona Health Care Cost Containment System

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Demand and Elasticity

The demand for a product or service can be viewed as a trade-off between price and quantity. The higher the price, the lower the quantity that will be sold. This can be plotted on a graph as a demand curve (see graphic). Because measurements of price and quantity vary significantly, economists have created a standardized measure for comparing price and quantity. This measure is called the *elasticity* of demand and is represented by the percent change in the quantity divided by the percent change in the price. A high elasticity of demand means that a small percent change in price has had a large impact on the percent change in quantity. Relatively speaking, the demand for health care is considered to be in-elastic—changes in price tend to have a small impact on changes in quantity. The presence of health insurance complicates the equation.

Demand curve

Elasticity of Health Care

To understand the elasticity of health care, one must understand the economics of the health care marketplace. Health care is comprised of both products and services. Health care products (e.g., pharmaceuticals) are measured using the number of items sold, while health care services (e.g., physician visits) are measured using presentation rates. To understand the real-life impact of elasticity of demand for health care products and services, the impact on the number of items sold or presentation rate is examined.

Overall, research in this area has validated the fact that individuals purchase less health care when prices increase. In general, however, medical care is not as price-responsive as more traditional goods and services, such as cars or car washes. Because health care has a relatively low elasticity of demand, small percent increases in the price do not generally result in high percent decreases in the desired quantity. But health care is not a single homogeneous product. Health care is actually a series of products and services, each having their own elasticity. As expected, more medically necessary health care (e.g., hospital care) is least price-responsive, while "well care" services (e.g., preventive checkups) are most price-responsive. Comparing the elasticities of inpatient services versus well care visits demonstrate the relative level of price sensitivity within health care. Studies have shown that (Keeler, et al., 1988):

- a 10 percent increase in the price of inpatient services results in a 1 percent reduction in inpatient service utilization, while
- a 10 percent increase in the price of well care services results in a 4 percent reduction in well care utilization.

Elasticity of Health Insurance

Health insurance skews the demand for medical care and, therefore, complicates the elasticity of health care. Health insurance insulates individuals from the real cost of health care. The out-of-pocket expenses of health insurance vary dramatically among various insurance products. This means that in practice, a price increase of an office visit

may result in a significantly lower presentation rate for individuals with certain insurance policies, while hardly affecting the presentation rate of individuals with other types of insurance policies. Furthermore, large price increases for certain medical services may affect an individual's decision to purchase a specific type of insurance, or may convince them to forego insurance all together. As would be expected, it has been shown that as the cost of insurance (premiums, copays, etc.) increases there is a corresponding decrease in the number of purchasers of health insurance:

- According to estimates provided by the Congressional Budget Office (CBO) and an independent study by Kronick and Gilmer, for every 1 percent increase in health care premiums, there is an estimated 0.1 percent decrease of insured Americans.
- The Urban Institute (UI), in examining subsidized insurance programs in 3 states, found evidence to suggest that for every 1 percent increase in premiums as a percentage of income, there is a corresponding drop in presentation of approximately 10 percent.

Overall, the studies tend to reinforce the notion that health insurance is relatively inelastic, similar to health care in general. The Urban Institute Study is especially relevant to the Task Force as it examines the experience of subsidized insurance programs targeted at low-income individuals, one of Arizona's largest uninsured populations. It is difficult to generalize the experience of the 3 programs specifically to Arizona; however, the overall experience of the 3 programs is consistent. Based on Figure 1 below, the curve summarizes the relationship between three states' premiums and program participation. When premiums are 1 percent of income, presentation is only projected to be 57 percent. This is down from Medicaid presentation rates of 70 percent– 80 percent. When premiums rise to 3 percent of income, the presentation rate drops to 35 percent, and at 5 percent of income the presentation rate drops to 18 percent. Even small changes in premiums, when measured, at least, as a percent of an individual's income, can dramatically reduce presentation rates for subsidized programs.

Figure 1. Estimated Participation Function,
The Urban Institute, 1995
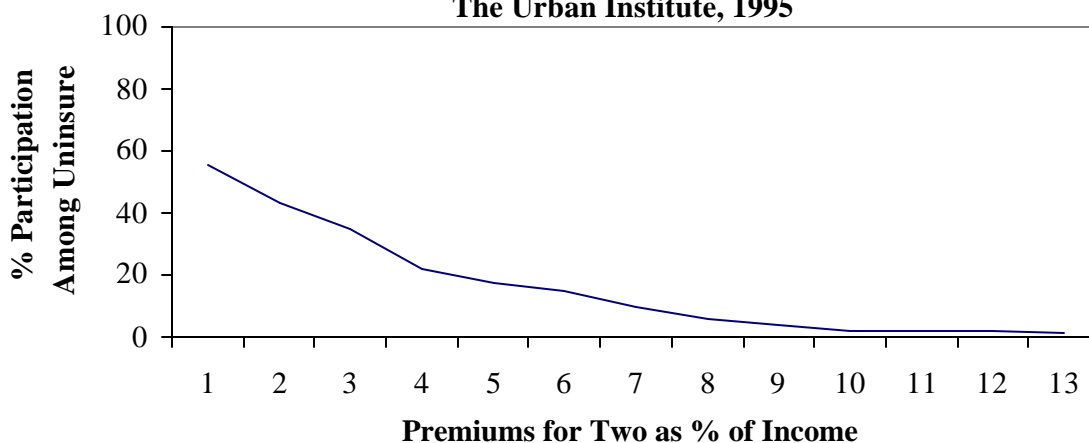
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